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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,953	09/26/2003	Bin Zhang	200208037-1	9403

22879 7590 05/29/2009
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INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

ONYEZIA, CHUKS N

ART UNIT	PAPER NUMBER
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3691

NOTIFICATION DATE	DELIVERY MODE
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05/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/672,953	Applicant(s) ZHANG ET AL.	
	Examiner CHUKS ONYEZIA	Art Unit 3691	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 3,9 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' amendment and arguments filed on 03/02/2009 have been fully considered, and discussed below. It is noted that applicant has amended claim 1 and added new claims 18 and 19. Therefore, claim 1-19 are pending and currently considered for examination.

Allowable Subject Matter

2. Claims 3, 9, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on Supreme Court precedent, a method/process claim must (1) be tied to another statutory class of invention (such as a particular apparatus) (see at least *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978);

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Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least Gottschalk v. Benson, 409 U.S. 63, 71 (1972)). A method/process claim that fails to meet one of the above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. . Here the claims fails to meet the above requirements because the steps are neither tied to another statutory class of invention (such as a particular apparatus) nor physically transform underlying subject matter (such as an article or materials) to a different state or thing.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

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convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner views the recitation, of "a computer" in the amended claim 1, as new matter since it is not found within the text of the original specification.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 4-8, 10-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Messmer et al. U.S. Patent Number 7,096,197 B2 (PTO-892 Reference A) in view of Makivic U.S. Patent Number 6,061,662 (PTO-892 Reference C).

9. As per claim 1, Messmer teaches a method, comprising:
obtaining historical auction data (Col. 10 Lns. 1-5);
selecting a bidder; obtaining a value distribution for the selected bidder (Col. 9 Lns 39-50); and

However Messmer does not explicitly disclose;

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determining, from the historical auction data, a first parameter that is a function of a joint bid distribution and a density function related to the joint bid distribution or solving an equation that includes the first parameter and the selected bidder's value distribution, and not the value distribution of other bidders, to compute a bid value associated with the selected bidder for a given bid.

Makivic discloses the uses of historical data to form a probability density in determining an option price (see Makivic Col 25 Lns. 21-25). Makivic further discloses deriving a price sensitivity parameter and solving a simulation to compute an option price (Makivic Col 25 Lns. 4-15). It would have been obvious for one of ordinary skill in the arts to apply combine these two disclosers in this way for the purpose of performing online, network-based quantitative analysis and derivative valuation for market participants (Makivic Col 2 Lns. 59-62).

10. As per claim 2, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches solving the equation comprises solving an ordinary differential equation that comprises a probability value distribution associated with the selected bidder and the derivative of the probability value distribution (see Makivic Col. 10 Lns. 11-30).

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11. As per claim 4, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches determining a first parameter comprises computing a ratio of the density function to the joint bid distribution (Makivic Col. 28 Ln. 33-40).

12. As per claim 5, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches repeating the acts of selecting a bidder, obtaining a probability value distribution for the selected bidder and solving the equation for additional bidders (Col. 2 Lns. 65-67) examiner interprets the object of providing for plurality of analyses as repeating the price process.

13. Claim sets 6-8,10,11, 12-13, and 14,15,17, 19 are rejected using logic similar to that used to reject claim set 1,2,4,5 (Col. 24 Lns. 16-40) examiner interprets that system limitations of above claims are detailed with the description of computer and internet network.

14. As per claim 18, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches displaying the bid value associate wit the selected bidder for a given bid. (Makivic Col 17 Lns 40-46, The market module provides functions to examine and price currently traded contracts, using some of the information supplied by the historical calibration module.

The results of the analysis can be displayed in graphical as well as tabular fashion and is stored in the database if requested by the user for future reference).

Response to Arguments

15. Applicant's arguments filed 03/02/2009 have been fully considered but they are not persuasive.

16. Applicant argues that:

A. As to claim 1, cited art does not teach "a first parameter that is a function of a joint bid distribution and density function related to the joint bid distribution; and

B. As to claim 1, the cited art does not teach three different elements in an equation for computing bid value being joint bid distribution, density function, and selected bidder's value distribution.

Examiner responds that:

a. Makivic discloses the uses of historical data to form a probability density in determining an option price (see Makivic Col 25 Lns. 21-25). Examiner interprets that the probability density involves underlying parameter values in its determination.

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b. Makivic discloses the uses of historical data to form a probability density in determining an option price (see Makivic Col 25 Lns. 21-25). Makivic further discloses deriving a price sensitivity parameter and solving a simulation to compute an option price (Makivic Col 25 Lns. 4-15). Examiner interprets the probability density, its underlying parameters, and the price sensitivity parameter as the respective 3 equation elements.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

/C. Onyezia/
Examiner, Art Unit 3691

/Alexander Kalinowski/
Supervisory Patent
Examiner, Art Unit 3691
